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**APPENDIX D – COEUR D'ALENE NATIVE FISH STRATEGY  
(CNFISH)**



## Appendix D: CNFISH Strategy – INFISH Crosswalk

In 2002, the BLM Idaho State Director signed a memorandum of understanding with several other federal agencies, agreeing to implement the Interior Columbia Basin Ecosystem Management Project Strategy. This strategy specifies that “until administrative unit plans [RMPs] are amended or revised utilizing the ICBEMP Science in this Strategy, management will continue under current plans. This will include interim PACFISH, INFISH [Inland Native Fish Strategy] direction...” INFISH provides interim direction for protecting resident fish populations and habitat in Idaho, western Montana, eastern Washington, and eastern Oregon.

The development of the Coeur d’Alene RMP meets the specific criteria for modifying or adapting INFISH direction. The BLM Coeur d’Alene Field Office conducted a thorough analysis of INFISH and developed direction that would be applicable to management of BLM-administered public lands within the planning area. The table below is a crosswalk comparing key components of the Inland Native Fish Strategy (INFISH) with direction that will be incorporated into the Coeur d’Alene Draft RMP (CdA Native Fish Strategy or CNFISH).

In 2004, a memorandum was issued by the BLM, FS, FWS, EPA and NOAA Fisheries to transmit a document titled “A Framework for Incorporating the Aquatic and Riparian Component of the Interior Columbia Basin Strategy into BLM and Forest Service Plan Revisions (Framework)”. This document provides direction for six component addressing aquatic and riparian management to be incorporated into revised plans. The components and how they are addressed in the Coeur d’Alene Draft RMP are as follows:

1. **Riparian Conservation Areas** (RCAs) are areas of particular value for aquatic conservation and where riparian-dependent resources receive management emphasis. RCAs are delineated in the CNFISH table below. Standards and guidelines for actions within RCAs are also found in the table below.
2. **Protection of Population Strongholds for Listed or Proposed Species and Narrow Endemics** is addressed in Appendix E: Conservation and Restoration Watersheds.
3. **Multiscale Analysis** is addressed in the CNFISH Strategy table below under Watershed Analysis. The potential analysis scales are basin, subbasin, watershed and project; analysis at the appropriate scale provides the context needed for decision making.
4. **Restoration Priorities and Guidance** can be found in Appendix E: Conservation and Restoration Watersheds.
5. **Management Direction (such as desired conditions or objectives)** is found in the CNFISH Strategy table below under Riparian Management Objectives (RMOs). An adaptive management approach will be used as a means to identify and achieve desired aquatic and riparian conditions. Many of the INFISH objectives have been modified for the CNFISH strategy, and additional objectives have been added. All modifications, except water temperature, are based on criteria in the Matrix of Diagnostics/Pathways and Indicators found in *A Framework to Assist in Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Bull Trout Subpopulation Watershed Scale*. Temperature criteria were incorporated from the *EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards*. These objectives should be considered interim, and local adjustment may and should occur based on site-specific or watershed scale analysis. Some of the interim objectives may not be attainable in all systems and local reference data will be required as a basis for modifications.

6. **Monitoring/Adaptive Management:** The monitoring strategy is currently being developed and will address protocols for both implementation and effectiveness monitoring needed to implement adaptive management.

**CNFish Strategy - INFISH Crosswalk**

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
	<b>INFISH wording</b>	
<b>Goals</b> Maintain or Restore...	The goals are to maintain or restore:	All 8 goals will be incorporated into the RMP.
	(1) Water quality, to a degree that provides for stable and productive riparian and aquatic ecosystems	
	(2) Stream channel integrity, channel processes, and the sediment regime (including the elements of timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems developed.	
	(3) Instream flows to support healthy riparian and aquatic habitats, the stability and effective function of stream channels, and the ability to route flood discharges.	
	(4) Natural timing and variability of the water table elevation in meadows and wetlands.	
	(5) Diversity and productivity of native and desired non-native plant communities in riparian zones.	
	(6) Riparian vegetation to: (a) Provide an amount and distribution of large woody debris characteristic of natural aquatic and riparian ecosystems; (b) Provide adequate summer and winter thermal regulation within the riparian and aquatic zones; and (c) Help achieve rates of surface erosion, bank erosion, and channel migration characteristic of those under which the communities developed.	
	(7) Riparian and aquatic habitats necessary to foster the unique genetic fish stocks that evolved within the specific geo-climatic region.	
	(8) Habitat to support populations of well-distributed native and non-native plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities.	
<b>Riparian Management Objectives</b>	Apply where watershed analysis has not been done. The components of good habitat can vary across specific geographic areas. Interim	Many of the INFISH objectives have been modified for the CNFISH strategy, and additional objectives have been added. Other

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)																																								
Forested and non-forested ecosystems	RMOs are considered to be the best watershed scale information available; BLM managers would be encouraged to establish site-specific RMOs through watershed analysis or site-specific analysis.	<p>than temperature, modifications and additions are based on criteria in the Matrix of Diagnostics/Pathways and Indicators found in <i>A Framework to Assist in Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Bull Trout Subpopulation Watershed Scale</i>. Temperature criteria were incorporated from the <i>EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards</i>.</p> <p>These objectives may be adjusted and additional objectives adopted as future site-specific analysis is completed and/or new scientific information becomes available.</p>																																								
	<p><b>(1) Pool frequency (all systems)</b></p> <table><tr><th>Wetted width (ft)</th><th>#pools/Mile</th></tr><tr><td>10</td><td>96</td></tr><tr><td>20</td><td>56</td></tr><tr><td>25</td><td>47</td></tr><tr><td>50</td><td>26</td></tr><tr><td>75</td><td>23</td></tr><tr><td>100</td><td>18</td></tr><tr><td>125</td><td>14</td></tr><tr><td>150</td><td>12</td></tr><tr><td>200</td><td>9</td></tr></table>	Wetted width (ft)	#pools/Mile	10	96	20	56	25	47	50	26	75	23	100	18	125	14	150	12	200	9	<p><b>(1) Pool Frequency (all systems)</b></p> <table><tr><th>Wetted width (ft)</th><th>#pools/Mile</th></tr><tr><td>0-5</td><td>39</td></tr><tr><td>5-10</td><td>60</td></tr><tr><td>10-15</td><td>48</td></tr><tr><td>15-20</td><td>39</td></tr><tr><td>20-30</td><td>23</td></tr><tr><td>30-35</td><td>18</td></tr><tr><td>35-40</td><td>10</td></tr><tr><td>40-65</td><td>9</td></tr><tr><td>65-100</td><td>4</td></tr></table> <p>Also, pools have good cover and cool water, and only minor reduction of pool volume by fine sediment.</p>	Wetted width (ft)	#pools/Mile	0-5	39	5-10	60	10-15	48	15-20	39	20-30	23	30-35	18	35-40	10	40-65	9	65-100	4
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		<p><b>(1)a. Large Pools</b> (in adult holding, juvenile rearing and overwintering reaches where streams are &gt; 3m in wetted width at baseflow).</p> <p>Each reach has many large pools &gt; 1 meter deep.</p>																																								
		<p><b>(1)b. Off-Channel Habitat</b></p> <p>Watershed has many ponds, oxbows, backwaters, and other off-channel areas with cover; and side channels are low energy areas.</p>																																								
	<p><b>(2) Water temperature (all systems)</b> No measurable increase in maximum water temperature (7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature of the warmest consecutive 7-day period).</p> <p>Maximum water temperature below 59°F within adult holding habitat and below 48°F within spawning and rearing habitats.</p>	<p><b>(2) Water temperature (all systems)</b> No measurable increase in maximum water temperature (7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature of the warmest consecutive 7-day period).</p> <p><b>(2)a. Water temperature in bull trout habitat*</b></p> <ul style="list-style-type: none"><li>i) Juvenile rearing: 12°C (55 °F)</li><li>ii) Spawning: 9°C (48 °F)</li></ul>																																								

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
		<p><b>(2)b. Water temperature in salmonid habitat other than bull trout (mainly westslope cutthroat trout)*</b></p> <ul style="list-style-type: none"> <li>i) core juvenile rearing: 16 °C (61 °F)</li> <li>ii) migration/non-core juvenile rearing: 18 °C (64 °F)</li> <li>iii) migration: 20 °C (68 °F)</li> <li>iv) spawning, egg incubation, fry emergence: 13 °C (55 °F)</li> </ul> <p>*all temperatures are 7-day moving average of daily maximum temperature</p>
	<b>(3) Large woody debris (forested systems)</b> >20 pieces per mile, >12 inch diameter, >35 foot length	<b>(3) Large woody debris (forested systems)</b> Current values are being maintained at >20 pieces per mile, >12 inch diameter, >35 foot length. Also, adequate sources of woody debris available for short and long term recruitment.
	<b>(4) Bank stability (non-forested systems)</b> >80% stable	<b>(4) Bank stability :</b> >80% of any stream reach has ≥90% stability.
	<b>(5) Lower bank angle (non-forested systems)</b> >75% of banks with <90 degree angle (i.e., undercut)	<b>(5) Lower bank angle (non-forested systems):</b> >75% of banks with <90 degree angle (i.e., undercut)
	<b>(6) Width/depth ratio (all systems)</b> <10, mean wetted width divided by mean depth	<b>(6) Average Wetted Width/Maximum Depth Ratio in scour pools in a reach:</b> ≤10
		<b>(7) Floodplain Connectivity:</b> Off-channel areas are frequently hydrologically linked to the main channel; overbank flows occur and maintain wetland functions, riparian vegetation and succession.
		<b>(8) Sediment in Spawning and Incubation Areas:</b> <12% fines (<0.85mm) in gravel; ≤20% surface fines of ≤6mm.
		<b>(9) Substrate Embeddedness in Rearing Areas:</b> Reach embeddedness <20%
<b>RHCAs/ RCAs</b>	RHCAs are portions of watersheds where riparian-dependent resources receive primary emphasis, and management activities are subject to specific standards and guidelines.	RCAs are lands that are likely to affect the condition and/or function of aquatic habitat, and may include areas adjacent to streams, ponds, lakes, wetlands, and unstable landscapes. In RCAs riparian-dependent resources receive primary emphasis, and management activities are subject to specific standards and guidelines.
	Interim RHCA widths apply where watershed analysis has not been completed. Establishment of RHCAs required completion of watershed analysis to provide the ecological	The dimensions of RCAs are best defined by local or watershed analysis. In the absence of such analysis, the following default RCA widths apply.

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
	basis for the change. However, interim RHCA's may be modified by amendment in the absence of watershed analysis where stream reach or site-specific data support the change. In all cases, the rational supporting RHCA widths and their effects would be documented.	
	<b>Category 1 – Fish bearing streams:</b> Interim RHCA's consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.	<b>Category 1 – Fish bearing streams:</b> RCA's consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edges of the riparian vegetation, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.
	<b>Category 2 – Permanently flowing non-fish bearing streams:</b> Interim RHCA's consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.	<b>Category 2 – Permanently flowing non-fish bearing streams:</b> RCA's consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edges of the riparian vegetation, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.
	<b>Category 3 – Ponds, lakes, reservoirs and wetlands greater than 1 acre:</b> Interim RHCA's consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.	<b>Category 3 – Ponds, lakes, reservoirs and wetlands greater than 1 acre:</b> RCA's consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.
	<b>Category 4 – Seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and landslide-prone areas:</b> This category includes features with high variability in size and site-specific characteristics. At a minimum the interim RHCA's must include: a. the extent of landslides and landslide-prone areas b. the intermittent stream channel and the area to the top of the inner gorge c. the intermittent stream channel or	<b>Category 4 – Seasonally flowing or intermittent streams and wetlands less than 1 acre with riparian characteristics as defined by properly functioning condition inventory, and landslides and landslide-prone areas:</b> This category includes features with high variability in size and site-specific characteristics. At a minimum the RCA's must include: a. the extent of landslide and landslide-prone areas and the area from the edges of the landslide/landslide-prone area to a

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	<p>wetland and the area to the outer edges of the riparian vegetation</p> <p>d. for Priority Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide prone area to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest</p> <p>e. for watersheds not identified as Priority Watersheds, the area from the edges of the stream channel, wetland, landslide, landslide-prone area to a distance equal to the height of one-half site potential tree, or 50 feet slope distance, whichever is greatest.</p>	<p>distance of 100 feet slope distance.</p> <p>b. the intermittent stream channel and the area to the top of the inner gorge, or to the outer edges of the riparian vegetation, or to the area from the edges of the stream channel to a distance of 100 feet slope distance, whichever is greatest.</p> <p>c. the wetland area and the area to the outer edges of the riparian vegetation, or to a distance of 100 feet slope distance, whichever is greatest.</p>
	Non-forested rangeland ecosystems Category 1 & 2 streams extent of 100 year flood plain.	Non-forested rangeland ecosystems Category 1 & 2 streams extent of 100 year flood plain.
<b>Standards and Guidelines</b>	<p>Apply to all RHCAs.</p> <p>Standards &amp; Guides apply to all RHCAs and to projects and activities in areas outside of RHCAs that are identified through NEPA analysis as potentially degrading RHCAs.</p>	Standards & Guides apply to all RCAs and to projects and activities in areas outside of RCAs that are identified through NEPA analysis as potentially degrading RCAs.
RCA-1 (NEW)		<p>Activities in RCAs will be designed to enhance, restore or maintain the physical and biological characteristics of the RCA by implementing the following:</p> <p>a. Activities in RCAs that are intact and functioning in a desired condition as indicated by RMOs or other measures must be designed to at least maintain that desired condition.</p> <p>b. Activities in RCAs that are not at or moving towards desired condition as indicated by RMOs or other measures must include a restoration component as part of the project if determined to be necessary/beneficial by a fisheries biologist, hydrologist or other aquatic specialist.</p> <p>c. Activities in RCAs must not result in long-term degradation to aquatic conditions. Limited short-term adverse/negative effects from activities in the RCA may be acceptable when outweighed by the long-term benefits to the RCA and aquatic resources.</p>



*Appendix D. Coeur d'Alene Native Fish Strategy (CNFISH)*

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
<b>Timber Mgmt</b>		
TM-1	Prohibit timber harvest, including fuelwood cutting, in RHCAs, except as described below. Do not include RHCAs in the land base used to determine the ASQ, but any volume harvested can be contribute to the timber sale program	Vegetation management practices may be used in RCAs only to restore or enhance physical and biological characteristics of the RCA including Riparian Management Objectives.
TM1-a	Where catastrophic events such as fire, flooding, volcanic, wind or insect damage result in degraded riparian conditions, allow salvage and fuelwood cutting in RHCAs only where present and future woody debris needs are met, where cutting would not retard or prevent attainment of the Riparian Management Objectives, and where adverse effects <i>on listed anadromous fish can be avoided</i> (can be avoided to inland native fish). For <i>with listed salmon or designated critical habitat</i> (priority watersheds), complete watershed analysis prior to salvage cutting in RHCAs. (PAC/IN)	No fuelwood cutting will be authorized within an RCA.
TM-1 b.	Apply silvicultural practices in RHCAs to acquire desired vegetation characteristics where needed to attain Riparian Management Objectives. Apply silvicultural practices in a manner that does not retard attainment of Riparian Management Objectives and that avoids adverse effects on inland native fish.	
<b>Roads Mgmt</b>		
RF-1	Cooperate with federal, tribal, State, and county agencies, and cost-share partners to achieve consistency in road design, operation, and maintenance necessary to attain Riparian Management Objectives.	Cooperate with federal, tribal, State, and county agencies, and cost-share partners to achieve consistency in road design, operation, and maintenance necessary to attain Riparian Management Objectives.
RF-2	For each existing or planned road, meet the Riparian Management Objectives and avoid adverse effects to inland native fish by:	For each existing or planned road (authorized across BLM-managed land or BLM easement across other lands), strive to meet the Riparian Management Objectives and avoid adverse effects to native fish.
RF-2 a.	Completing watershed analysis prior to construction of new roads or landings in RHCAs within priority watersheds.	Complete watershed or site specific analysis, prior to construction of new roads or landings in RCAs. The analysis will be done at the scale appropriate to the road and/or landing.  Analysis will include the site-scale, in the context of the reach scale, and the watershed scale.
RF-2b.	Minimizing road and landing locations in RHCAs.	When practical close existing roads, and avoid constructing new roads or landings within RCAs.
RF2-c.	Initiating development and implementation of a Road Management Plan or a Transportation	Ensure that the Transportation/Travel Management Plan is consistent with RMOs.

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	<p>Management Plan. At a minimum, address the following items in the plan:</p> <ol style="list-style-type: none"> <li>1. Road design criteria, elements, and standards that govern construction and reconstruction.</li> <li>2. Road management objectives for each road.</li> <li>3. Criteria that govern road operation, maintenance, and management.</li> <li>4. Requirements for pre-, during-, and post- storm inspections and maintenance.</li> <li>5. Regulation of traffic during wet periods to minimize erosion and sediment delivery and accomplish other objectives.</li> <li>6. Implementation and effectiveness monitoring plans for road stability, drainage, and erosion control.</li> <li>7. Mitigation plans for road failures.</li> </ol>	
RF2-d.	<p>Avoiding sediment delivery to streams from the road surface.</p> <ol style="list-style-type: none"> <li>1. Outsloping of the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe.</li> <li>2. Route road drainage away from potentially unstable stream channels, fills, and hillslopes.</li> </ol>	<p>Avoid sediment delivery to streams from the road surface.</p> <ol style="list-style-type: none"> <li>1. Outsloping of the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe.</li> <li>2. Route road drainage away from potentially unstable stream channels, fills, and hillslopes.</li> </ol>
RF2-e.	Avoiding disruption of natural hydrologic flow paths	When practical avoid disruption of natural hydrologic flow paths.
RF2-f.	Avoiding sidecasting of soils or snow. Sidecasting of road materials is prohibited on road segments within or abutting RHCAs in priority watersheds.	Sidecasting of road materials is prohibited on road segments within or abutting RCAs.
RF-3	<p>Determine the influence of each road on Riparian Management Objectives. Meet Riparian Management Objectives and avoid adverse effects to inland native fish by:</p> <ol style="list-style-type: none"> <li>a. reconstructing road and drainage features that do not meet design criteria or operation and maintenance standards, or that have been shown to be less effective than designed for controlling sediment delivery, or that retard attainment of Riparian Management Objectives, or do not protect priority watersheds from increased sedimentation.</li> </ol>	<p>Avoid adverse effects to native fish by:</p> <ol style="list-style-type: none"> <li>a. relocating or reconstructing road and drainage features that do not meet design criteria or operation and maintenance standards, or that have been shown to be less effective than designed for controlling sediment delivery, or that delays or prevents attainment of Riparian Management Objectives within the expected, near natural period of restoration as determined by an aquatic, soils, and/or riparian specialist, or do not protect native fish from increased sedimentation.</li> </ol>

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	<p>b. prioritizing reconstruction based on the current and potential damage to inland native fish and their priority watersheds, the ecological value of the riparian resources affected, and the feasibility of options such as helicopter logging and road relocation out of RHCAs.</p> <p>c. closing and stabilizing or obliterating, and stabilizing roads not needed for future management activities. Prioritize these actions based on the current and potential damage to native inland fish in priority watersheds, and the ecological value of riparian resources affected.</p>	<p>b. prioritizing reconstruction based on the current and potential habitat, the ecological value of the riparian resources affected, and the feasibility of options such as helicopter logging and road relocation out of RCAs.</p> <p>c. closing and stabilizing or obliterating, and stabilizing roads not needed for future management activities. Prioritize these actions based on the current and potential damage to native fish, and the ecological value of riparian resources affected.</p>
RF-4	<p>Construct new and improve existing culverts bridges and other stream crossings to accommodate a 100-year flood, including associated bedload and debris, where those improvements would/ do pose a substantial risk to riparian conditions. Substantial risk improvements include those that do not meet design and operation maintenance criteria, or that have been shown to be less effective than designed for controlling erosion, or that retard attainment of Riparian Management Objectives, or that do not protect priority watersheds from increased sedimentation. Base priority for upgrading on risks to priority watersheds and the ecological value of the riparian resources affected. Construct and maintain crossings to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.</p>	<p>When constructing new, replacement and reconstructed culverts, bridges, and other stream crossings accommodate a 100-year flood, including associated bedload and debris. Substantial risk improvements include those that do not meet design and operation maintenance criteria, or that have been shown to be less effective than designed for controlling erosion, or that delay attainment of Riparian Management Objectives, or that do not protect native fish habitat from increased sedimentation. Base priority for upgrading on risks to native fish and the ecological value of the riparian resources affected. Construct and maintain crossings to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.</p>
RF-5	<p>Provide and maintain fish passage at all road crossings of existing and potential fish-bearing streams.</p>	<p>Provide and maintain passage for fish and other aquatic organisms at new, replacement, and reconstructed road crossings of existing and potential fish-bearing streams, unless barriers are determined beneficial for native fish.</p> <p>The preferred approach is to implement streambed simulation strategies or have no crossing structure.</p>

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<b>Grazing Mgmt</b>		
GM-1	Modify grazing practices (e.g., accessibility of riparian areas to livestock, length of grazing season, stocking levels, timing of grazing, etc.) that retard or prevent attainment of Riparian Management Objectives or are likely to adversely affect native inland fish. Suspend grazing if adjusted practices are not effective in meeting Riparian Management Objectives.	Range project plans, allotment management plans, and annual plans of operation shall be developed, revised, and maintained where needed to achieve the RMOs. These plans establish objectives for managing vegetation resources (including activities needed to achieve the objectives) to achieve desirable riparian conditions. This may include grazing schedule, grazing system, season of use, class of livestock, stocking levels, forage products and utilization rates, and improvements needed to achieve objectives. The results of monitoring riparian and streamside condition will be used to determine the need for change.
GM-2	Locate new livestock handling and/or management facilities outside of RHCAs. For existing livestock handling facilities inside RHCAs, assure that facilities do not prevent attainment of Riparian Management Objectives. Relocate or close facilities where these objectives cannot be met.	Locate new livestock handling and/or management facilities outside of RCAs. For existing livestock handling facilities inside RCAs, assure that facilities do not prevent attainment of Riparian Management Objectives or adversely affect native fish. Relocate or close facilities where these objectives cannot be met.
GM-3	Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that would not prevent or retard attainment of Riparian Management Objectives or adversely affect inland native fish.	Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that would not prevent or delay attainment of Riparian Management Objectives or adversely affect native fish
<b>Recreation Mgmt</b>		
RM-1	Design, construct, and operate recreation facilities, including trails and dispersed sites, in a manner that does not retard or prevent attainment of the Riparian Management Objectives and avoids adverse effects on inland native fish. Complete watershed analysis prior to construction of new recreation facilities in RHCAs. For existing recreation facilities inside RHCAs, assure that the facilities or use of the facilities will not prevent attainment of Riparian Management Objectives or adversely affect inland native fish. Relocate or close recreation facilities where Riparian Management Objectives cannot be met or adverse effects inland native fish cannot be avoided.	Design, construct, and operate recreation facilities, including trails and dispersed sites, in a manner that does not delay or prevent attainment of the Riparian Management Objectives and avoids adverse effects on native fish. Complete site specific watershed analysis prior to construction of new recreation facilities in RCAs. The level of watershed or site specific analysis should be commensurate with the scope and issues of the project and related aquatic resources. For existing recreation facilities inside RCAs, assure that the facilities or use of the facilities will not prevent attainment of Riparian Management Objectives or adversely affect native fish. Relocate or close recreation facilities where Riparian Management Objectives cannot be met or adverse effects on native fish cannot be avoided.
RM-2	Adjust dispersed and developed recreation practices that retard or prevent attainment of Riparian Management Objectives or adversely affect inland native fish. Where adjustment measures such as education, use limitations,	Adjust dispersed and developed recreation practices that delays or prevents attainment of Riparian Management Objectives within the expected, near natural period of restoration as determined by an aquatic, soils, and/or

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	traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective in meeting Riparian Management Objectives and avoiding adverse effects on inland native fish, eliminate the practice or occupancy.	riparian specialist, or adversely affect native fish. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective in meeting Riparian Management Objectives and avoiding adverse effects on native fish, eliminate the practice or occupancy.
RM-3	Address attainment of Riparian Management Objectives and potential effect on inland native fish in Wild and Scenic Rivers, Wilderness, and other Recreation Management plans.	Address attainment of Riparian Management Objectives and potential effect on native fish in Wild and Scenic Rivers, Wilderness, and other Recreation Management plans.
<b>Minerals Mgmt</b>		
MM-1	Minimize adverse affects to inland native fish from mineral operations. If a Notice Of Intent indicates that a mineral operation would be located in an RHCA, consider the effects of the activity on inland native fish in the determination of significant surface disturbance pursuant to 36 CFR 228.4. For operations in RHCAs ensure operators take all practicable measures to maintain, protect, and rehabilitate fish and wildlife habitat which may be affected by the operations. When bonding is required, consider (in the estimation of the bond amount) the cost of stabilizing, rehabilitating, and reclaiming the area of operations.	Minimize adverse affects to native fish from mineral operations. If a Notice Of Intent indicates that a mineral operation would be located in an RCA, consider the effects of the activity on native fish in the determination of significant surface disturbance pursuant 43 CFR Part 3000s. For operations in RCAs ensure operators take all practicable measures to maintain, protect, and rehabilitate fish and wildlife habitat which may be affected by the operations. When bonding is required, consider (in the estimation of the bond amount) the cost of stabilizing, rehabilitating, and reclaiming the area of operations.
MM-2	Locate structures, support facilities, and roads outside RHCAs. Where no alternative to siting facilities in RHCAs exists, locate and construct the facilities in ways that avoid impacts to RHCAs and streams and adverse effects on inland native fish. Where no alternative to road construction exists, keep roads to the minimum necessary for the approved mineral activity. Close, obliterate, and revegetate roads no longer required for mineral or land management activities.	Locate structures, support facilities, and roads outside RCAs. Where no alternative to siting facilities in RCAs exists, locate and construct the facilities in ways that avoid impacts to RCAs and streams and adverse effects on native fish. Where no alternative to road construction exists, keep roads to the minimum necessary for the approved mineral activity. Close, obliterate, and revegetate roads no longer required for mineral or land management activities.
MM-3	Prohibit solid and sanitary waste facilities in RHCAs. If no alternative to locating mine waste (waste rock, spent ore, tailings) facilities in RHCAs exists, and releases can be prevented and stability can be ensured, then:	Prohibit solid and sanitary waste facilities in RCAs. If no alternative to locating mine waste (waste rock, spent ore, tailings) facilities in RCAs exists, and releases can be prevented and stability can be ensured, then:
a.	analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics.	analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics.
b.	locate and design the waste facilities using the best conventional techniques to ensure mass stability and prevent the release of acid or toxic	locate and design the waste facilities using the best conventional techniques to ensure mass stability and prevent the release of acid or toxic

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
	materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, prohibit such facilities in RHCAs	materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, prohibit such facilities in RCAs
c.	monitor waste and waste facilities to assure chemical and physical stability, and make adjustments to operations as needed to avoid adverse effects to inland native fish and Riparian Management Objectives.	monitor waste and waste facilities to assure chemical and physical stability, and make adjustments to operations as needed to avoid adverse effects to native fish and Riparian Management Objectives.
d.	reclaim and monitor waste facilities to assure chemical and physical stability and re-vegetation to avoid adverse effects to inland native fish, and to attain the Riparian Management Objectives.	reclaim and monitor waste facilities to assure chemical and physical stability and re-vegetation to avoid adverse effects to native fish, and to attain the Riparian Management Objectives.
e.	require reclamation bonds adequate to ensure long-term chemical and physical stability and successful re-vegetation of mine waste facilities.	require reclamation bonds adequate to ensure long-term chemical and physical stability and successful re-vegetation of mine waste facilities.
MM-4	For leasable minerals, prohibit surface occupancy within RHCAs for oil, gas and geothermal exploration and development activities where contracts and leases do not already exist, unless there are no other options for location and Riparian Management Objectives can be attained and adverse effects to inland native fish can be avoided. Adjust the operating plans of existing contracts to (1) eliminate impacts that prevent attainment of Riparian Management Objectives and (2) avoid adverse effects to inland native fish-	For leasable minerals, prohibit surface occupancy within RCAs (NSO-2 see Appendix H) where contracts and leases do not already exist, unless there are no other options for location and Riparian Management Objectives can be attained and adverse effects to native fish can be avoided. Adjust the operating plans of existing contracts to (1) eliminate impacts that prevent attainment of Riparian Management Objectives and (2) avoid adverse effects to native fish.
MM-5	Permit sand and gravel mining and extraction within RHCAs only if no alternatives exist, if the action(s) would not retard or prevent attainment of Riparian Management Objectives, and adverse effects to inland native fish be avoided.	Permit sand and gravel mining and extraction within RCAs only if no alternatives exist, if the action(s) would not delay or prevent attainment of Riparian Management Objectives within the expected, near natural period of restoration as determined by an aquatic, soils, and/or riparian specialist, and adverse effects to native fish can be avoided.
MM-6	Develop inspection, monitoring, and reporting requirements for mineral activities. Evaluate and apply the results of inspection and monitoring to modify mineral plans, leases, or permits as needed to eliminate impacts that prevent attainment of Riparian Management Objectives and avoid adverse effects on inland native fish.	Develop inspection, monitoring, and reporting requirements for mineral activities. Evaluate and apply the results of inspection and monitoring to modify mineral plans, leases, or permits as needed to eliminate impacts that prevent attainment of Riparian Management Objectives and avoid adverse effects on native fish.

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
<b>Fire Mgmt</b>		
FM-1	Design fuel treatment and fire suppression strategies, practices, and actions so as not to prevent attainment of Riparian Management Objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions could perpetuate or be damaging to long-term ecosystem function or inland native fish.	Design and implement fire suppression strategies, practices, and actions so as not to delay or prevent attainment of Riparian Management Objectives within the expected, near natural period of restoration as determined by an aquatic, soils, and/or riparian specialist. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression actions could perpetuate or be damaging to long-term ecosystem function or native fish.
FM-2	Locate incident bases, camps, helibases, staging areas, helispots and other centers for incident activities outside of RHCAs. If the only suitable location for such activities is within the RHCA, an exemption may be granted following a review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements, with avoidance of adverse effects to inland native fish a primary goal. Use an interdisciplinary team, including a fishery biologist, to predetermine incident base and helibase locations during pre-suppression planning.	Locate incident bases, camps, helibases, staging areas, helispots and other centers for incident activities outside of RCAs. If the only suitable location for such activities is within the RCA, an exemption may be granted following a review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements, with avoidance of adverse effects to native fish as a primary goal. Use an interdisciplinary team, including a fishery biologist, during pre-suppression planning to predetermine incident base and helibase locations.
FM-3	Avoid delivery of chemical retardant, foam, or additives to surface waters. An exception may be warranted in situations where overriding immediate safety imperatives exist, or following a review and recommendation by a resource advisor and a fishery biologist, when the action agency determines an escape fire would cause more long-term damage to fish habitats than chemical delivery to surface waters.	Avoid delivery of chemical retardant, foam, or additives to surface waters. An exception warranted where overriding immediate safety imperatives exist. An exception may be warranted when the action agency, with concurrence from a resource advisor and a fisheries biologist, determines an escape fire would cause more long-term damage to fish habitats than chemical delivery to surface waters.
FM-4	Design prescribed burn projects and prescriptions to contribute to the attainment of the Riparian Management Objectives.	Design prescribed burn projects and prescriptions to contribute to the attainment of the Riparian Management Objectives.
FM-5	Immediately establish an emergency team to develop a rehabilitation treatment plan to attain Riparian Management Objectives and avoid adverse effects on native inland fish whenever RHCAs are significantly damaged by wildfire, suppression activities or prescribed fire burning out of prescription.	
<b>Lands</b>		
LH-1	Require instream flows and habitat conditions for hydroelectric and other surface water development proposals that maintain or restore riparian resources, favorable channel conditions, and fish passage, reproduction and	Require instream flows and habitat conditions for hydroelectric and other surface water development proposals that maintain or restore riparian resources, favorable channel conditions, and fish passage, reproduction and

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
	growth. Coordinate this process with the appropriate State agencies. During re-licensing of hydroelectric projects, provide written and timely license conditions to the Federal Energy Regulatory Commission (FERC) that require fish passage and flows and habitat conditions that maintain/restore riparian resources and channel integrity. Coordinate re-licensing projects with the appropriate State agencies.	growth. Coordinate this process with the appropriate State agencies. During re-licensing of hydroelectric projects, provide written and timely license conditions to the Federal Energy Regulatory Commission (FERC) that require fish passage and flows and habitat conditions that maintain/restore riparian resources and channel integrity. Coordinate re-licensing projects with the appropriate State agencies.
LH-2	Locate new hydroelectric ancillary facilities outside RHCAs. For existing ancillary facilities inside the RHCA that are essential to proper management, provide recommendations to FERC to assure that the facilities would not prevent attainment of the Riparian Management Objectives and that adverse effects on inland native fish are avoided. Where these objectives cannot be met, provide recommendations to FERC that such ancillary facilities should be relocated. Locate, operate and maintain hydroelectric facilities that must be located in RHCAs to avoid effects that would retard or prevent attainment of the Riparian Management Objectives and avoid adverse effects on inland native fish.	Locate new hydroelectric ancillary facilities outside RCAs. For existing ancillary facilities inside the RCA that are essential to proper management, provide recommendations to FERC to assure that the facilities would not prevent attainment of the Riparian Management Objectives and that adverse effects on native fish are avoided. Where these objectives cannot be met, provide recommendations to FERC that such ancillary facilities should be relocated. Locate, operate and maintain hydroelectric facilities that must be located in RCAs to avoid effects that would delay or prevent attainment of the Riparian Management Objectives and avoid adverse effects on native fish.
LH-3	Issue leases, permits, rights-of-way, and easements to avoid effects that would retard or prevent attainment of the Riparian Management Objectives and avoid adverse effects on inland native fish. Where the authority to do so was retained, adjust existing leases, permits, right-of-way, and easements to eliminate effects that would retard or prevent attainment of the Riparian Management Objectives or adversely affect native aquatic species and/or water quality. Priority for modifying existing leases, permits, right-of-way and easements would be based on the current and potential adverse effects on inland native fish, and the ecological value of the riparian resources affected.	Issue leases, permits, rights-of-way, and easements to avoid effects that would delay or prevent attainment of the Riparian Management Objectives and native fish. Where the authority to do so was retained, adjust existing leases, permits, right-of-way, and easements to eliminate effects that would delay or prevent attainment of the Riparian Management Objectives or adversely affect native aquatic species and/or water quality. Priority for modifying existing leases, permits, right-of-way and easements would be based on the current and potential adverse effects on native fish, and the ecological value of the riparian resources affected.
LH-4	Use land acquisition, exchange and conservation easements to meet Riparian Management Objectives and facilitate restoration of fish stocks and other species at risk of extinction.	Use land acquisition, exchange and conservation easements to meet Riparian Management Objectives and facilitate restoration of fish stocks and other species at risk of extinction.
<b>General Riparian Area Mgmt</b>		
RA-1	Identify and coordinate with Federal, Tribal, State and local governments to secure instream flows needed to maintain riparian resources, channel conditions and aquatic habitat.	Identify and coordinate with Federal, Tribal, State and local governments to secure instream flows needed to maintain riparian resources, channel conditions and aquatic habitat.



<b>INFISH</b>	<b>Original Conservation Measures</b>	<b>Direction in the CdA RMP (CNFish Strategy)</b>
RA-2	Trees may be felled in RHCAs when they pose a safety risk. Keep felled trees on site when needed to meet woody debris objectives.	Trees may be felled in RCAs when they pose a safety risk. Keep felled trees on site when needed to meet woody debris objectives.
RA-3	Apply herbicides, pesticides, and other toxicants, and other chemicals in a manner that does not retard or prevent attainment of Riparian Management Objectives and avoids adverse effects on inland native fish.	Apply herbicides, pesticides, and other toxicants, and other chemicals in a manner that does not delay or prevent attainment of Riparian Management Objectives within the expected, near natural period of restoration as determined by an aquatic, soils, and/or riparian specialist, and avoids adverse effects on native fish.
RA-4	Prohibit storage of fuels and other toxicants within RHCAs. Prohibit refueling within RHCAs unless there are no other alternatives. Refueling sites within an RHCA must be approved by the Forest Service or Bureau of Land Management and have an approved spill containment plan.	Prohibit storage of fuels and other toxicants and refueling within RCAs unless there are no other practicable alternatives. Refueling sites and storage areas within an RCA must be approved and have an approved spill containment plan.
RA-5	Locate water drafting sites to avoid adverse effects to inland native fish and instream flows, and in a manner that does not retard or prevent attainment of Riparian Management Objectives.	Locate water drafting sites to avoid adverse effects to native fish and instream flows, and in a manner that does not delay or prevent attainment of Riparian Management Objectives within the expected, near natural period of restoration as determined by an aquatic, soils, and/or riparian specialist.
<b>Watershed and Habitat Restoration</b>		
WR-1	Design and implement watershed restoration projects in a manner that promotes the long-term ecological integrity of ecosystems, conserves the genetic integrity of native species, and contributes to attainment of Riparian Management Objectives.	Design and implement watershed restoration projects in a manner that promotes the long-term ecological integrity of ecosystems, conserves the genetic integrity of native species, and contributes to attainment of Riparian Management Objectives.
WR-2	Cooperate with Federal, State, local and Tribal agencies and private landowners to develop watershed-based Coordinated Resource Management Plans (CRMPs) or other cooperative agreements to meet Riparian Management Objectives.	Cooperate with Federal, State, local and Tribal agencies and private landowners to develop watershed-based Coordinated Resource Management Plans (CRMPs) or other cooperative agreements to meet Riparian Management Objectives.
<b>Fisheries and Wildlife Restoration</b>		
FW-1	Design and implement fish and wildlife habitat restoration and enhancement actions in a manner that contributes to attainment of Riparian Management Objectives.	Design and implement fish and wildlife habitat restoration and enhancement actions in a manner that contributes to attainment of Riparian Management Objectives.
FW-2	Design, construct, and operate fish and wildlife interpretive and other user-enhancement facilities in a manner that does not retard or prevent attainment of the Riparian Management Objectives or adversely affect inland native fish. For existing fish and	Design, construct, and operate fish and wildlife interpretive and other user-enhancement facilities in a manner that does not delay or prevent attainment of the Riparian Management Objectives or adversely affect native fish. For existing fish and wildlife

*Appendix D. Coeur d'Alene Native Fish Strategy (CNFISH)*

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
	wildlife interpretive and other user-enhancement facilities inside RHCAs, assure the Riparian Management Objectives are met and adverse effected on inland native fish are avoided. Where Riparian Management Objectives cannot be met or adverse effects on inland native fish avoided, relocate or close such facilities.	interpretive and other user-enhancement facilities inside RCAs, assure the Riparian Management Objectives are met and adverse effected on native fish are avoided. Where Riparian Management Objectives cannot be met or adverse effects on native fish avoided, relocate or close such facilities.
FW-3	Cooperate with Federal, and State wildlife management agencies to identify and eliminate wild ungulate impacts that prevent attainment of the Riparian Management Objectives or adversely affect inland native fish.	Cooperate with Federal, and State wildlife management agencies to identify and eliminate wild ungulate impacts that prevent attainment of the Riparian Management Objectives or adversely affect native fish.
FW-4	Cooperate with Federal, and State fish management agencies to identify and eliminate adverse effects on native anadromous fish associated with habitat manipulation, fish stocking, fish harvest, and poaching.	Cooperate with Federal, and State fish management agencies to identify and eliminate adverse effects on native anadromous fish associated with habitat manipulation, fish stocking, fish harvest, and poaching.
<b>Conservation and Restoration Watersheds</b>	Areas in good condition would serve as anchors for the potential recovery of depressed stocks, and also would provide colonists for adjacent areas where habitat had been degraded by land management or natural events. Those areas of lower quality habitat with high potential for restoration would become future sources of good habitat with the implementation of a comprehensive restoration program. Priority watersheds would have the highest priority for restoration, monitoring and watershed analysis.	Determine what watersheds are “Conservation” watersheds and which ones are “Restoration” watersheds.  See Appendix E
Restoration Watershed Criteria	1. Watersheds with stocks listed pursuant to the Endangered Species Act, or stocks identified in the 1991 American Fisheries Society report as “at risk”.  2. Watersheds that contain excellent habitat for mixed salmonid assemblages.  3. Degraded watersheds with a high restoration potential.	
Conservation watershed criteria	1. Watersheds with excellent habitat or strong assemblages of inland native fish, with a priority on bull trout populations.  2. Watersheds that provide for meta-population objectives.  3. Degraded watersheds with high restoration potential.	

INFISH	Original Conservation Measures	Direction in the CdA RMP (CNFish Strategy)
<b>Watershed Analysis – Biological Opinion</b>	Priority watersheds are highest priority for watershed analysis. Complete watershed analysis in existing INFISH priority watersheds, and special emphasis watersheds. Project decisions will be guided by the results of watershed analysis.	When feasible the BLM will coordinate with the FS with their watershed analysis schedule but BLM will not be a lead on watershed analysis due to our scattered land patterns. For small tracts of federal land associated with high value salmonid habitats, the BLM will use focused analysis at the reach, watershed, or subbasin scales. <sup>1</sup>
Watershed Analysis - Biological Opinion	As part of watersheds analyses, road inventories, and other appropriate information will be used to collaborate with NOAA and FWS in developing restoration strategies. Restoration strategies will be used to identify key processes needing attention, prioritize key locations and project types, address implementation and scheduling issues and provide a preliminary estimate of costs. These strategies will serve as the primary framework for implementation of integrated restoration activities. (BO).	Roads analysis is part of the plan revision and will continue to be a part of larger watershed assessments.
<b>Road Inventories Biological Opinion</b>	Continue updating road inventories.	Current road inventories are being used as part of the base for plan revision.
<b>Watershed Restoration Biological Opinion</b>	The FS and BLM in cooperation with NOAA-Fisheries and the USFWS will develop and implement strategies that will integrate and coordinate restoration, protection, and evaluation measures (construction/maintenance, flood repair, watershed and fish habitat improvements, etc.) to expeditiously achieve restoration objectives at multiple scales. Restoration opportunities will be identified through an agreed upon approach using existing funding, information and programs, and incorporating new information as it becomes available. <i>The Interim Watershed Restoration Strategy was completed in May, 2000 and is available to the field units.</i>	The Cd'A RMP will include conservation and restoration strategies/themes for watersheds. See Appendix E.
Monitoring Biological Opinion	Monitoring is an important component of the proposed interim direction. The primary focus is to verify that the standards and guidelines were applied during the project implementation.	Cd'A BLM monitoring will address effectiveness of implementing standards and guidelines.

<sup>1</sup> As described in the FS/BLM memorandum dated July 29, 2004: Clarification of NMFS and USFWS 1998 Biological Opinion Requirements for completing Watershed Analysis (PACFISH, INFISH) and Subbasin Assessments (PACFISH only)

## **References**

### **INFISH**

- U.S. Environmental Protection Agency. 2003. EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards. EPA 910-B-03-002. Region 10 Office of Water, Seattle, WA.
- U.S. Fish and Wildlife Service. 1998. A Framework to Assist in Making Endangered Species Act Determinations of Effect for Individual and Grouped Actions at the Bull Trout Subpopulation Watershed Scale.